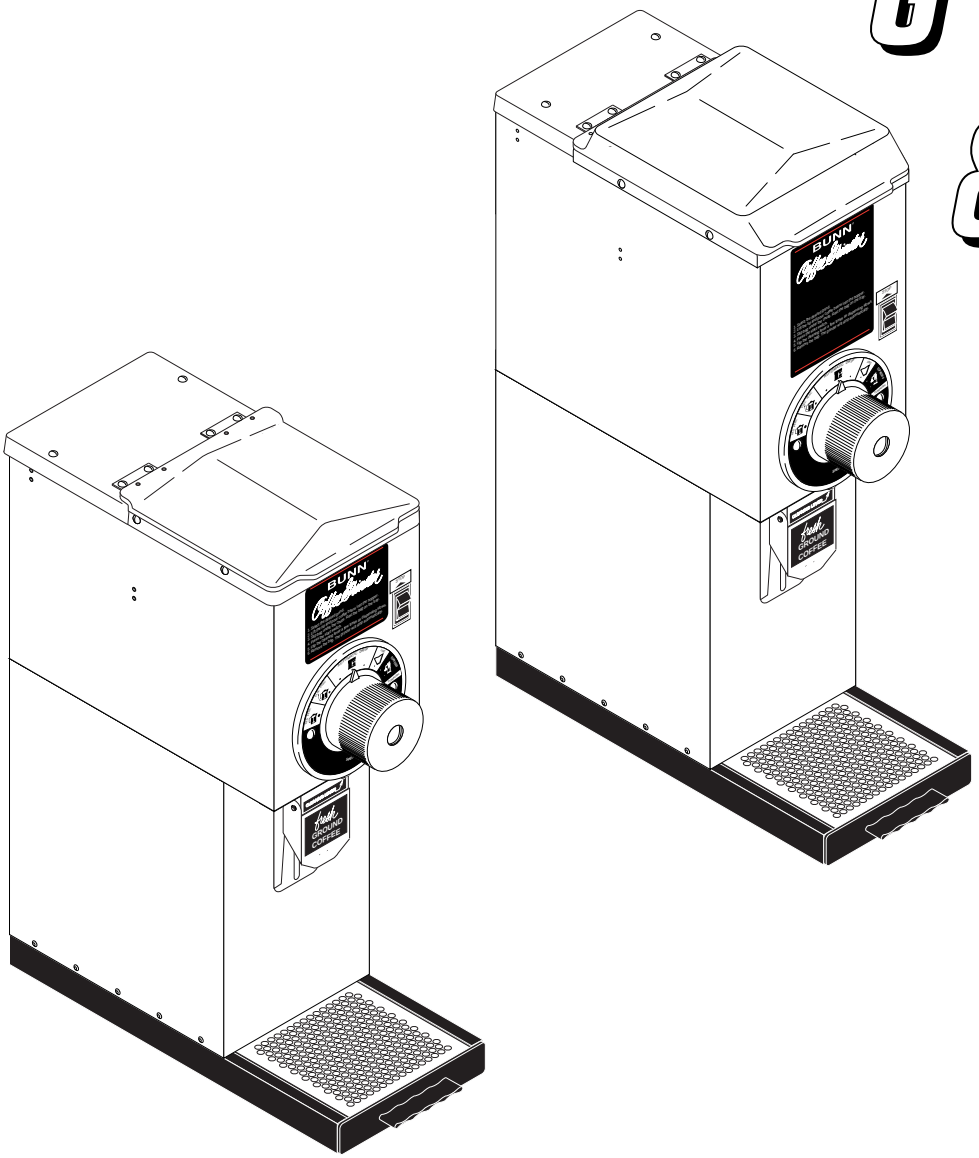
BUNN®

G1, G2 & G3



OPERATING & SERVICE MANUAL

BUNN-O-MATIC CORPORATION

POST OFFICE BOX 3227
SPRINGFIELD, ILLINOIS 62708-3227
PHONE: (217) 529-6601 FAX: (217) 529-6644

10191.0000Q 1/00 ©1995 Bunn-O-Matic Corporation

INTRODUCTION

This equipment will grind whole bean coffee to a user-selectable setting and dispense it into a bag. The equipment is only for indoor use on a sturdy counter or shelf. Adequate space must be available above the grinder to raise the lid when adding beans.

BUNN-O-MATIC COMMERCIAL GRINDER WARRANTY

Bunn-O-Matic Corp. ("Bunn") warrants the equipment manufactured by it to be commercially free from defects in material and workmanship existing at the time of manufacture and appearing within one year from the date of installation. In addition, Bunn warrants that the grinding burrs will grind coffee to meet original factory screen sieve analysis for three years from date of installation or for 30,000 pounds of coffee, whichever comes first. This warranty does not apply to any equipment, component or part that was not manufactured by Bunn or that, in Bunn's judgement, has been affected by misuse, neglect, alteration, improper installation or operation, improper maintenance or repair, damage or casualty.

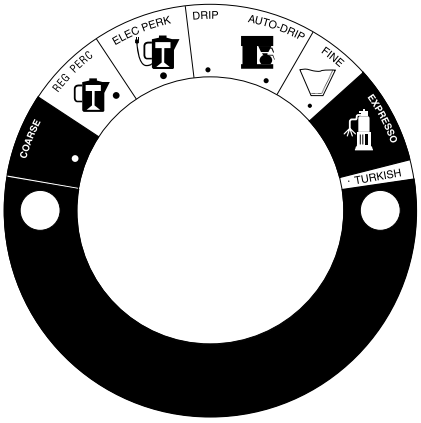
THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF EITHER MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The agents, dealers or employees of Bunn are not authorized to make modifications to this warranty or to make additional warranties that are binding on Bunn. Accordingly, statements by such individuals, whether oral or written, do not constitute warranties and should not be relied upon.

The Buyer shall give Bunn prompt notice of any claim to be made under this warranty by telephone at (217) 529-6601 or by writing to Post Office Box 3227, Springfield, Illinois, 62708-3227. If requested by Bunn, the Buyer shall ship the defective equipment prepaid to an authorized Bunn service location. If Bunn determines, in its sole discretion, that the equipment does not conform to the warranty, Bunn shall repair the equipment with no charge for parts during the one year warranty period and no charge for labor by a Bunn Authorized Service Representative during the one year warranty period. If Bunn determines that repair is not feasible, Bunn shall, at its sole option, replace the equipment or refund the purchase price for the equipment.

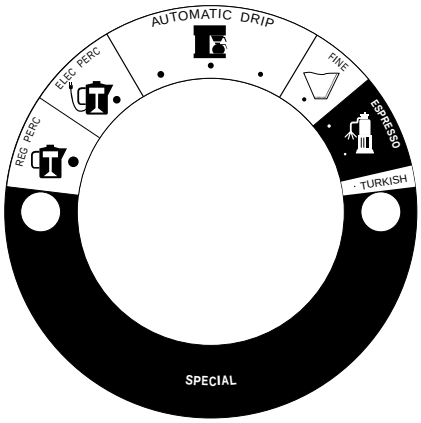
THE BUYER'S REMEDY AGAINST BUNN FOR THE BREACH OF ANY OBLIGATION ARISING OUT OF THE SALE OF THIS EQUIPMENT, WHETHER DERIVED FROM WARRANTY OR OTHERWISE, SHALL BE LIMITED, AS SPECIFIED HEREIN, TO REPAIR OR, AT BUNN'S SOLE OPTION, REPLACEMENT OR REFUND. Bunn shall not be liable for any other damage or loss, including, but not limited to, lost profits, lost sales, loss of use of equipment, claims of Buyer's customers, cost of capital, cost of down time, cost of substitute equipment, facilities or services, or any other special, incidental or consequential damages.

USER NOTICES

Carefully read and follow all notices on the grinder and in this manual. They were written for your protection. All notices on the grinder are to be kept in good condition. Replace any unreadable or damaged labels.



11075.0000



11075.0004 (SPECIAL)

PLEASE CLOSE LID BEFORE GRINDING

CAUTION — **PERSONAL INJURY HAZARD**
Keep Fingers & Foreign Objects out of Hopper or Chute Opening

PLEASE DO NOT POUR GROUND COFFEE BACK INTO GRINDER

11076.0000

⚠WARNING

- Use only on a properly protected circuit capable of the rated load.
- Electrically ground the chassis.
- Follow national/local electrical codes.
- Do not use near combustibles.

An extension cord, when used, must be shorter than 20 feet if 16-gage 3-conductor wire, or shorter than 10 feet if 18-gage 3-conductor wire.

FAILURE TO COMPLY RISKS EQUIPMENT DAMAGE, FIRE, OR SHOCK HAZARD

READ THE ENTIRE OPERATING MANUAL INCLUDING THE LIMIT OF WARRANTY AND LIABILITY BEFORE BUYING OR USING THIS PRODUCT

20545-0000 7/90 © 1990 Bunn-O-Matic Corporation

20545.0000

BUNN®
Coffee Grinder

1. Select the desired grind.
2. Lift the lid and pour coffee beans into the hopper.
3. Slip bag under the chute. Rest the bag on the tray.
4. Press the start switch.
5. Flip the cleaning lever a few times as dispensing slows.
6. Remove the bag. The grinder will stop automatically.

25152.0000 - G1

BUNN®
Coffee Grinder

1. Select the desired grind.
2. Lift the lid and pour coffee beans into the hopper.
3. Slip bag under the chute. Rest the bag on the tray.
4. Press the start switch.
5. Flip the cleaning lever a few times as dispensing slows.
6. Remove the bag. The grinder will stop automatically.

25153.0000 - G2 & G3

ELECTRICAL REQUIREMENTS

The 120 volt and 240 volt grinders have an attached cordset and requires 2-wire, grounded service rated 120 volts ac and 240 volts ac, 15 amp, single phase, 60 Hz. The 230 volt grinders have a power connector and requires 2-wire, grounded service rated 230 volts ac, 15 amp, single phase, 50 Hz.

INITIAL SET-UP

CAUTION - Unplug the grinder throughout the initial set-up.

1. Open the top lid. Clear all foreign objects and shipping materials from the hopper compartment and the entrance to the grind chamber.
2. Tip the machine gently, on its back, so it rests with approximately one inch of the bottom overhanging the work surface.
3. Remove the drawer from the base assembly.
4. Place the base against the grinder bottom and align the four sets of holes.
5. Securely fasten the base to the grinder bottom using the four screws and washers provided.
6. Raise the grinder to the upright position.
7. Insert the drawer into the base assembly.
8. The grinder can now be plugged-in and put into service.

OPERATING CONTROLS

Off/On/Start Switch

OFF - (upper position)

Switching to this position stops the operation of the grinder.

ON - (center, resting position)

The switch will return to this position after a grind cycle has begun and will remain in this position after grinding has ceased.

START - (lower, momentary position)

Pressing the switch initiates grinding only when a bag is in place behind the chute.

Grind Selector

Allows the user to vary the grind for each bag of coffee. Each setting will provide precisely the same grind every time it is selected.

Bag Sensor

Prevents the grinder from operating unless the back of a bag is in place behind the dispense chute.
Do not attempt to bypass this safety device.

CLEANING

The use of a damp cloth rinsed in any mild, non-abrasive, liquid detergent is recommended for cleaning all surfaces on Bunn-O-Matic equipment. Regular cleaning will keep your grinder looking new for years

COFFEE GRINDING

1. Turn the selector knob to align the red arrow with the desired grind.
2. Raise the top lid and add the whole bean coffee. Close the top lid.
3. Locate the back of a bag behind the dispense chute. (The grinder will not operate unless the bag is behind the chute.)
4. Allow the bag to rest on the screen beneath the chute.
5. Press the start switch.
6. Flip the cleaning lever a few times as dispensing slows.
7. Remove the bag when ground coffee is no longer dispensed from the chute. The grinder will stop automatically as the bag is removed.

NOTE - The start switch will have to be pressed again to continue the cycle if the bag is removed while grinding.

ADJUSTMENT

1. Place an empty bag on the screen, with the back of the bag behind the dispense chute.
2. Start the grinder to clear the grind chamber. Leave grinder “ON”.
3. Turn the Grind Selector knob to the “TURKISH” (fully clockwise) position.
4. Using a small flat blade screwdriver, loosen the two set screws on the left side of the grind selector knob.
5. Hold the knob in the “TURKISH” (fully clockwise) position with one hand.
6. Using a large flat blade screwdriver, slowly turn the adjusting screw in the center of the grind selector knob to the right (clockwise) until a metallic whine can be heard due to the rubbing of the grinding burrs.
7. While holding the knob in the “TURKISH” (fully clockwise) position, back off the screw to the left (counterclockwise) just until the metallic whine ceases.
8. Turn-off the grinder.
9. Push the knob against the dial plate and tighten both set screws on the left side of the grind selector knob.
10. Turn the grinder on and listen again for the metallic whine with the grind selector knob in the turkish (fully clockwise) position. If the metallic whine is heard, repeat steps 7 through 10 until the sound ceases.
11. If no metallic whine is heard, the grinding burrs are adjusted properly.

TROUBLESHOOTING

A troubleshooting guide is provided to suggest probable causes and remedies for the most likely problems encountered. If the problem remains after exhausting the troubleshooting steps, contact the Bunn-O-Matic Technical Service Department.

- Inspection, testing, and repair of electrical equipment should be performed only by qualified service personnel.

WARNING –
- Exercise extreme caution when servicing electrical equipment.
- Disconnect the grinder from the power source when servicing, except when electrical tests are specified.
- Follow recommended service procedures
- Replace all protective shields or safety notices

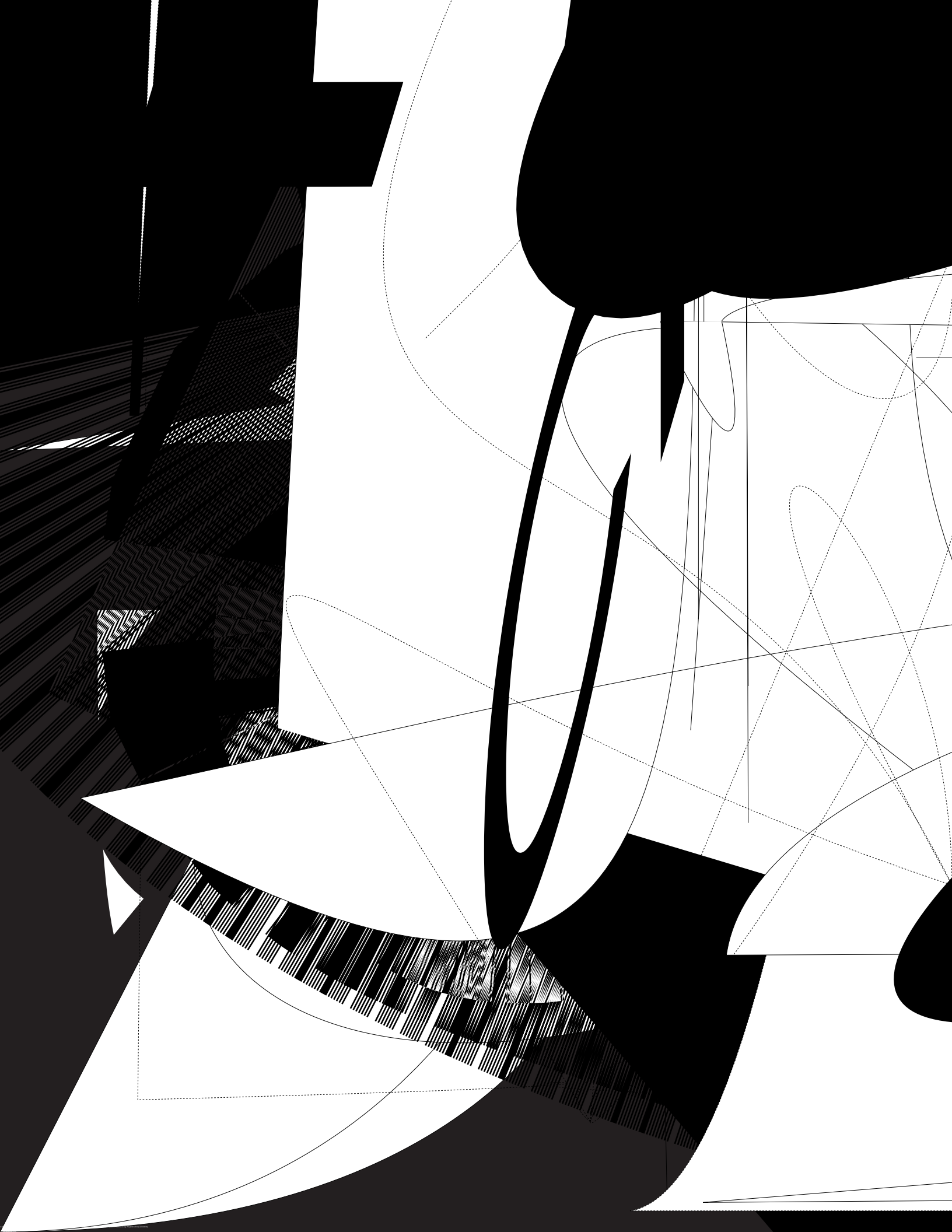
PROBLEM	PROBABLE CAUSE	REMEDY
Grinder will not start.	1. No power or incorrect voltage.	(A) Plug-in the grinder. (B) Check the voltage at the wall outlet with a voltmeter. It must be 120 volts ac for two wire 120 volt models or 230 volts ac for two wire 230 volt 50 Hz models or 240 volts ac for two wire 240 volt 60 Hz models.
	2. Off/On/Start Switch.	(A) Press the switch to the "START" position. (B) Refer to Service - Off/On/Start Switch for testing procedures. See page 16.
	3. Bag sensor.	(A) The receiving bag must be placed on the tray screen and have the back of the bag behind the dispense chute to activate the sensor switch.

TROUBLESHOOTING (cont.)

PROBLEM	PROBABLE CAUSE	REMEDY
Grinder will not start. (cont.)	3. Bag Sensor. (cont.)	(B) Refer to Service - Bag Sensor Switch for testing and adjustment procedures. See page 9.
	4. Motor overload protector.	Remove the plug located on the right side of the housing. Press the red "Reset" button visible through the opening. Listen carefully for a "click". This resets the motor protection circuit and may indicate that an overload has been encountered by the motor. (An overload can occur when something other than coffee is inserted into the hopper for grinding. Refer to *Service* - Motor for disassembly.) See page 10 for AC Motors or see page 13 for DC Motors.
Grinder will not shut off.	1. Off/On/Start Switch	(A) Move the switch to the "OFF" position. (B) Refer to *Service* - Off/On/Start Switch for testing procedures. See page 16.
	2. Bag Sensor	(A) Remove bag from under the dispense chute. (B) Refer to *Service* - Bag Sensor Switch for testing procedures. See page 9.
	3. Relay	Refer to *Service* - Relay for testing procedures. See page 18.

TROUBLESHOOTING (cont.)

PROBLEM	PROBABLE CAUSE	REMEDY
Grinder starts, but will not dispense.	1. Hopper	Coffee must be poured into hopper before grinding.
	2. Entrance to grind chamber	Foreign materials must not block the opening at the bottom of the hopper.
	3.Shear Plate	Remove both black fillister head screws holding the grinder selector dial plate to the grinder. Carefully remove the dial plate and rotor cup. Inspect the shear plate for wear. Replace if excessively worn or damaged.



SERVICE (cont,)

BAG SENSOR SWITCH (cont.)

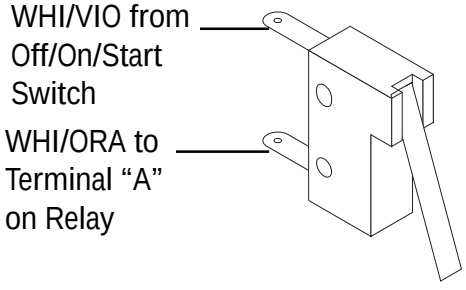
If voltage is present as described, proceed to #5.
If voltage is not present as described, refer to the Wiring Diagrams and check the grinder wiring harness.

5. Check for continuity across the terminals on the bag sensor switch.

If continuity is present as described, reconnect the wires, the switch is operating properly.
If continuity is not present as described, replace the switch.

Removal and Replacement:

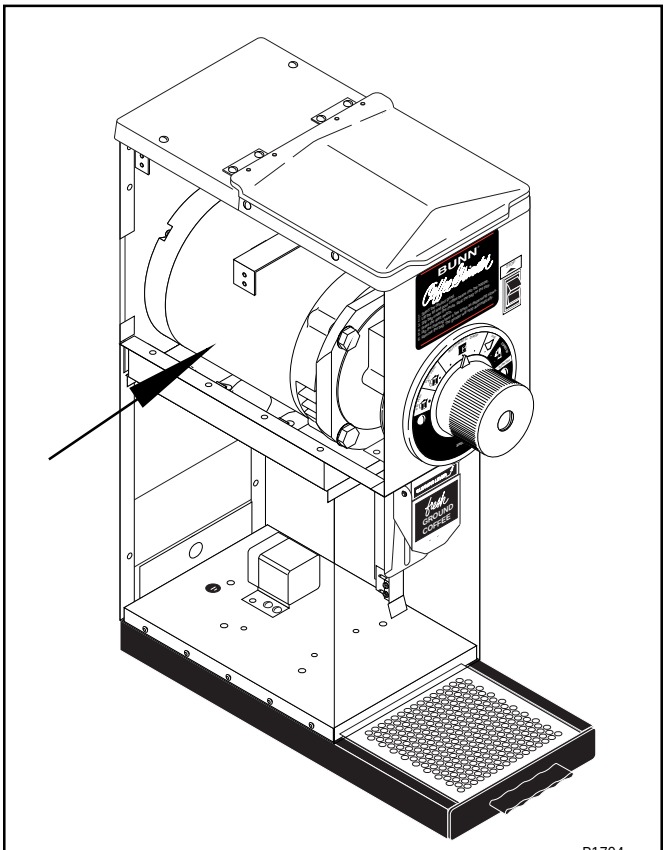
1. Remove the wires from the switch.
2. Remove the two #8-32 keps nuts securing the bag sensor assembly to the grinder housing.
3. Remove the two #2-56 screws, nuts and external tooth lockwashers securing the switch to the bag sensor assembly.
4. Mount the new switch to the bag sensor assembly using two #2-56 screws, nuts and external tooth lockwashers. Adjust the assembly by locating the corner of the switch housing to the top edge of the black metal mounting bracket.
5. Reattach the sensor assembly to the grinder housing and secure with two #8-32 keps nuts.
6. Refer to Fig. 3 when reconnecting the wires.



P1705

FIG. 3 BAG SENSOR SWITCH TERMINALS

AC MOTOR AND GRIND CHAMBER



P1704

FIG. 4 AC MOTOR AND GRIND CHAMBER

Location:

The motor is located inside the upper part of the grinder housing.

Test Procedure:

1. Remove the plug located on the right side of the housing. Press the red "Reset" button visible through the opening. Listen carefully for a "click". This resets the motor protection circuit and may indicate that something other than coffee was inserted into the hopper for grinding.

If the grinder remains unable to start, proceed to #2.
If the grinder stops operating shortly after starting, refer to removal and replacement instructions and inspect for foreign materials.

2. Disconnect the grinder from the power source and place a coffee bag behind the dispense chute.
3. Remove the electrical access panel at the rear of the motor.
4. Check the voltage across the white, red or red/

SERVICE (cont,)

AC MOTOR AND GRIND CHAMBER (cont.)

black and white/blue wires on terminals L1 & L2 with a voltmeter. Connect the grinder to the power source. When the Off/On/Start switch is momentarily placed in the "START" (lower) position and then left in the "ON" (center) position and a bag is in place behind the coffee dispense chute.Plug-in the grinder. The indication must be:

a. 120 volts ac for two wire 120 volt models.
b. 230 volts ac for two wire 230 volt models
c. 240 volts ac for two wire 240 volt models.

5. Disconnect the grinder from the power source.

If voltage is present as described replace the motor. If voltage is not present as described, reconnect the white, red or red/black and white/blue wires to the motor, refer to the Wiring Diagrams and check the grinder wiring harness.

Removal and Replacement - Motor (Refer to FIG.6):

1. Remove the plate on the rear of the motor and disconnect all wires from the motor.
2. Remove the two .250"-20 screws (1) securing grind selector dial plate and grind selector knob (2) to the grind chamber. Remove dial plate and selector knob as an assembly.
3. Slide burr (7), auger rotor/spring assembly (3), shear plate (4) and burr rotor cup (5) off the grinder motor shaft as an assembly.
4. Remove the two .250"-20 screws (8) securing the stationary burr (9) to the grind chamber.
5. Remove bushing (10) and shaft extension (11) from the grinder motor shaft.
6. Remove the two #8 thread forming screws (12) securing the fill plate (13) to grinder housing and remove plate (13).
7. Remove the four #10-24 screws (14) securing the chute assembly (15) to the grind chamber and remove chute assembly (15).
8. Remove the four .250"-20 screws, flat washer and rubber washers securing the motor to the mounting bracket.
9. Remove motor out the rear of the grinder housing.
10. Remove the four .250"-20 cage nuts from the motor mount.
11. Clean all grinding burrs and mounting surfaces before reassembly.
12. Install the four .250"-20 cage nuts on the new motor.
13. Place the new motor with hopper collar and bushing into position on the bushings on the motor mounting bracket.
14. Using four .250"-20 screws, flat washers and rubber washers secure the motor to the mounting bracket.
15. Install stationary burr (9) to the grind chamber housing using two .250"-20 screws.
16. Install burr (7) and burr auger rotor/spring assembly (3) on to motor shaft.
17. Install motor shaft extension (11) on motor shaft.
18. Align the slot in the motor shaft extension (11) with the slot in the burr auger rotor/spring assembly (6) and install shear plate (4).
19. Install burr rotor cup (5).
20. Install grind selector dial plate and grind selector knob assembly on the grind chamber housing and secure with two .250"-20 screws.
21. Refer to Fig. 5 and reconnect the wires.
22. Refer to *ADJUSTMENTS* on page 5 and reset the burrs.

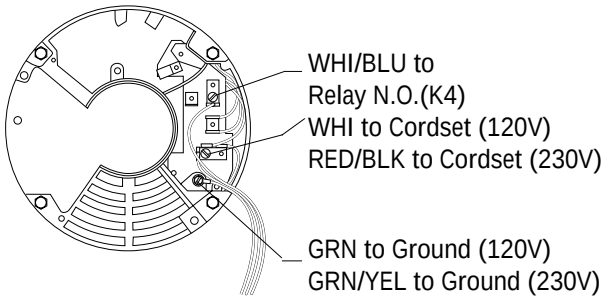
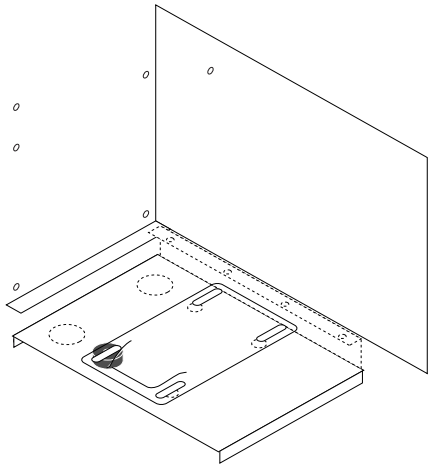


FIG. 5 AC MOTOR TERMINALS P1310

Removal and Replacement - Grind Chamber - Refer to Fig. 6:

1. Loosen the two set screws (16) securing the grind selector knob to the grind selector dial plate (18) and remove knob.
2. Remove the adjusting screw w/bearing (19). Inspect adjusting screw w/bearing for wear. Replace if excessively worn or damaged.

SERVICE (cont.)

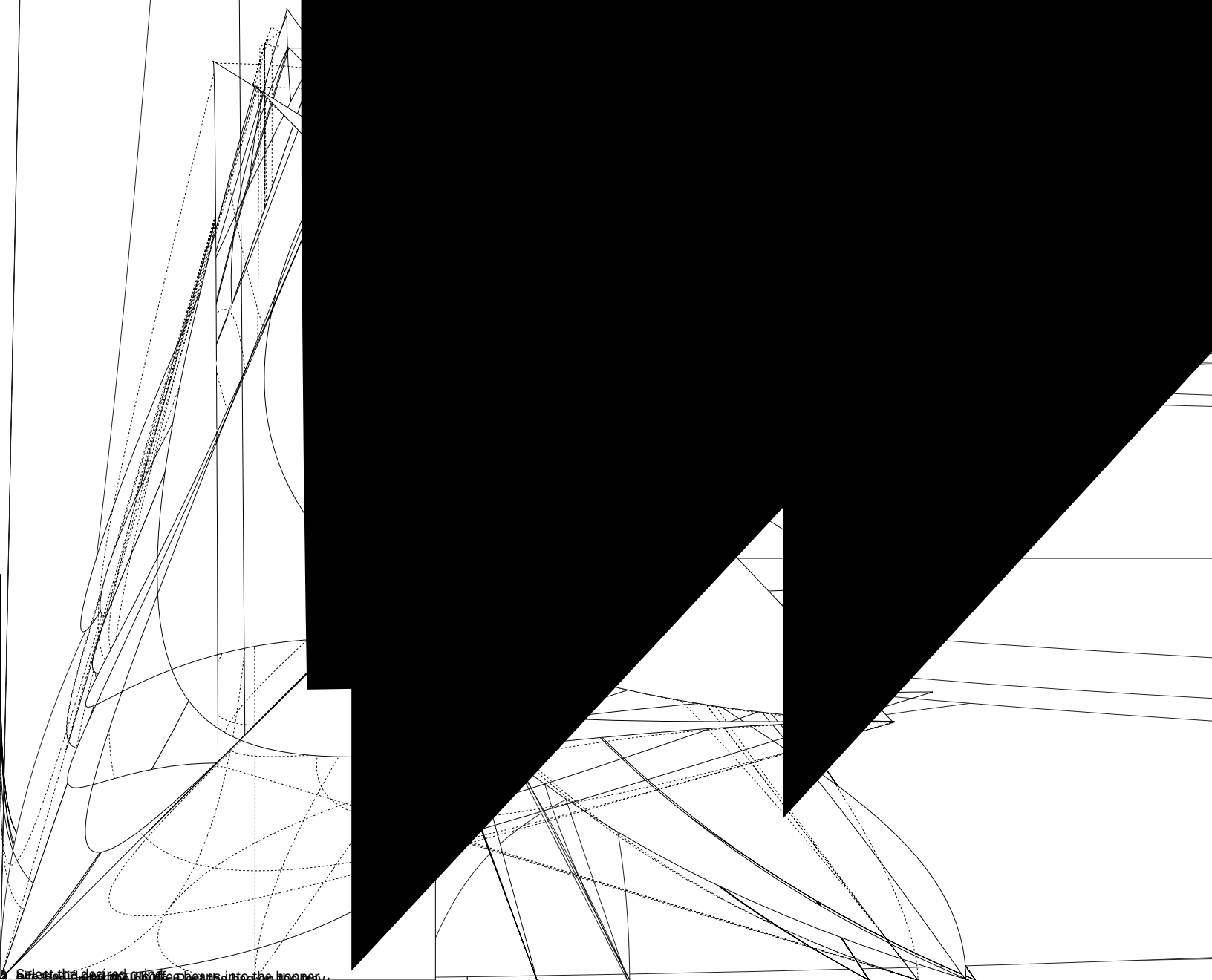


SERVIC

17. Ins
ing
be
18. Ins
se

NOTE:

DC MO



SERVICE (cont,)

DC MOTOR AND GRIND CHAMBER - G1MD ONLY (cont.)

10. Remove motor and bracket out the rear of the grinder housing.
11. Remove the two .250"-20 screws securing the motor to the front of the mounting bracket.
12. Remove the two #10-32 screws securing the motor to rear of the mounting bracket.
13 Remove motor from bracket.
14. Clean all grinding burrs and mounting surfaces before reassembly.
15 Place the new motor with hopper collar into position on the motor mounting bracket.
16. Using two .250"-20 screws secure the motor to the front of the mounting bracket.
17. Using two #10-32 screws secure the motor to the rear of the mounting bracket
18. Install motor and bracket through the rear of the grinder, position on the grinder housing bracket and secure with four .312"-18 screws (20), rubber washers (22) and flat washers (21).
19. Install stationary burr (9) to the grind chamber housing using two .250"-20 screws (8).
20. Install burr (7), burr auger rotor/spring assembly (3) and burr rotor disc (4) on to motor shaft.
21. Install grind selector dial plate and grind selector knob assembly (2) on the grind chamber housing and secure with two .250"-20 screws.
22. Refer to Fig. 8 and reconnect the wires to the motor and Fig. 13 and reconnect the wires to the rectifier.
23. Refer to *ADJUSTMENTS* on page 5 and reset the burrs.

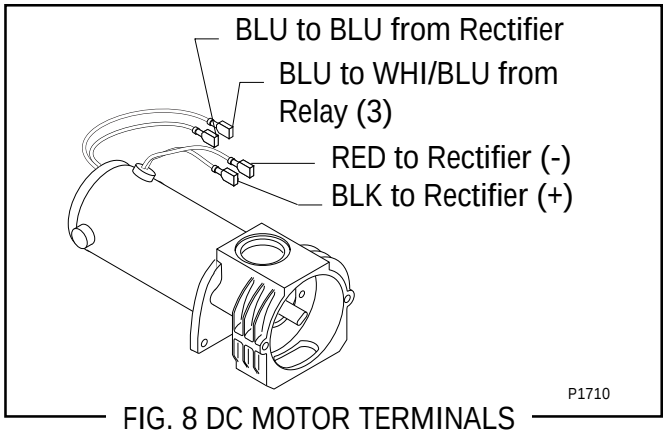


FIG. 8 DC MOTOR TERMINALS

Removal and Replacement - Grind Chamber - Refer to Fig. 9:

1. Loosen the two set screws (16) securing the grind selector knob to the grind selector dial plate (18) and remove knob.
2. Remove the adjusting screw w/bearing (19). Inspect adjusting screw w/bearing for wear. Replace if excessively worn or damaged.
3. Remove the two .250"-20 screws (1) securing the grind selector dial plate (18) to the grind housing and remove plate.
4. Slide burr auger rotor/spring assembly (3) off of the grinder motor shaft with burr (7) as an assembly.
5. Remove the two .250"-20 screws (5) securing burr (7) to burr auger rotor/spring assembly (6), remove burr (7) and burr rotor disc (4). Inspect burr (7) for wear. Replace if excessively worn or damaged.
6. Remove the two .250"-20 screws (8) securing the stationary burr (9) to grind chamber housing and remove burr. Inspect for wear. Replace if excessively worn or damaged.

NOTE: Burrs are serviced in sets of two with hardware.

7. Remove bushing (10) and washer (11) from grinder motor shaft. Inspect for wear. Replace if excessively worn or damaged.
8. Clean all grinding burrs and mounting surfaces before reassembly.
9. Install washer (11) and bushing (10) onto the grinder motor shaft.
10. Install stationary burr (9) inside the grind chamber and secure with two .250" -20 screws (8).

SERVICE (cont,)

OFF/ON/ START SWITCH

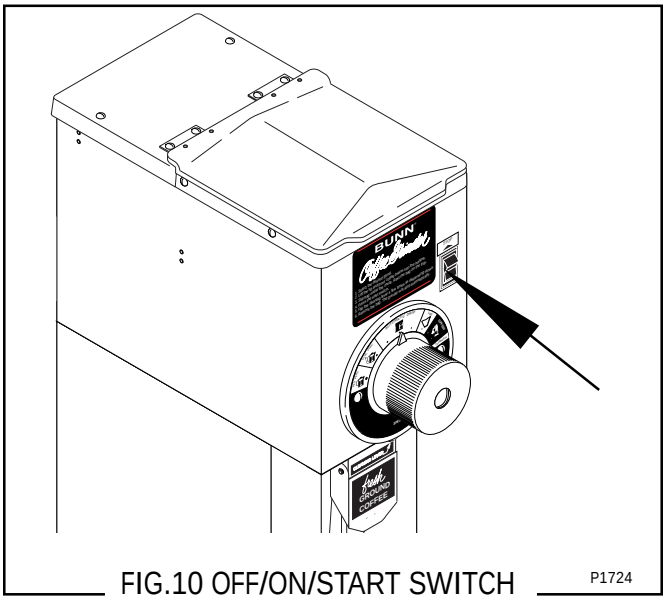


FIG.10 OFF/ON/START SWITCH P1724

Location:

The Off/On/Start switch is located in the upper front wrapper above and to the right of the grind selector knob (left side when viewed from rear).

Test Procedure:

1. Disconnect the grinder from the power source.
2. Check the voltage across the black wire on the Off/On/Start switch and the white wire or the red/black on the relay coil with a voltmeter. Connect the grinder to the power source. The indication must be:
   a. 120 volts ac for two wire 120 volt models.
   b. 230 volts ac for two wire 230 volt models.
   c. 240 volts ac for two wire 240 volt models.
3. Disconnect the grinder from the power source.

If voltage is present as described, proceed to #4.
If voltage is not present as described, refer to the Wiring Diagrams and check the grinder wiring harness.

4. Remove all four wires from the switch.
5. Check for continuity across the two 1/4" terminals when the switch is held in both the “ON” (center) and “START” (lower) positions. Continuity must not be present across these terminals in the “OFF” (upper) position.

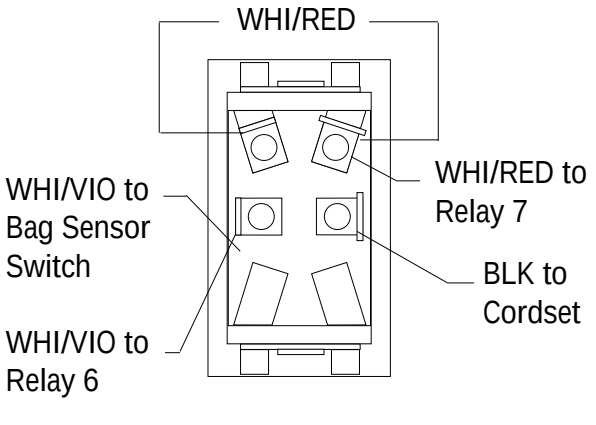
If continuity is present as described, proceed to #6.
If continuity is not present as described, replace the switch.

6. Check for continuity across the two 3/16" terminals when the switch is held in the “START” (lower) position. Continuity must not be present across these terminals in the “OFF” (upper) or “ON” (center) positions.

If continuity is present as described, the Off/On/Start switch is operating properly, reconnect the four wires.
If continuity is not present as described, replace the switch.

Removal and Replacement:

1. Remove all wires from the switch terminals.
2. Compress the clips inside the front wrapper and gently push the switch through the opening.
3. Push the new switch into the opening and spread the clips to hold the switch in the hood.
4. Refer to Fig. 11 when reconnecting the wires.

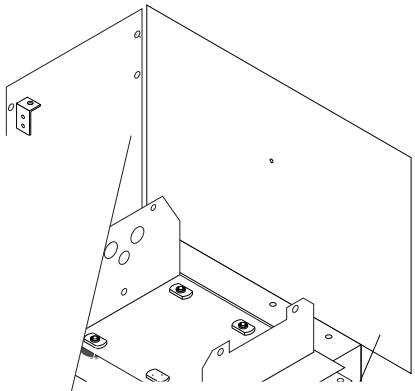


P606

FIG. 11 OFF/ON/START SWITCH TERMINALS

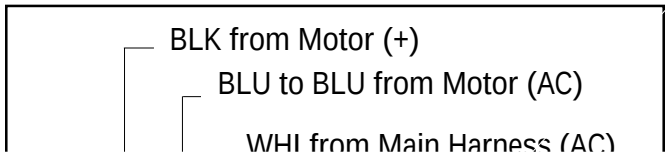
SERVICE (cont.)

RECTIFIER - G1MD ONLY



Removal and Replacement:

1. Disconnect the wires from the rectifier.
2. Remove the #10-32 screw securing the rectifier to the motor mounting bracket.
3. Remove the rectifier and discard.
4. Install new rectifier on the rear of the motor mounting bracket and secure with a #10-32 screw.
5. Refer to Fig. 13 and reconnect the wires.



Location:

The relay is located on the grinder base inside the lower housing.

Test Procedure:

1. Disconnect the grinder from the power source and place a coffee bag behind the dispense chute.
2. Check the voltage across the white/orange and white or red/black wires on terminals A & B of the relay with a voltmeter. Hold the Off/On/Start switch in the "START" (lower) position and connect the grinder to the power source. The indication must be:
   a. 120 volts ac for two wire 120 volt models.
   b. 230 volts ac for two wire 230 volt models.
   c. 240 volts ac for two wire 240 volt models
3. Disconnect the grinder from the power source.

If voltage is present as described, proceed to #4.
If voltage is not present as described, refer to the Wiring Diagrams and check the grinder wiring harness.

4. Remove the white/red wires from relay contacts 7 & 9.
5. Check the voltage across the white wire or red/black on terminal B and either white/red wire with a voltmeter. Place the Off/On/Start in either the "ON" (center) position or "START" (lower) position. Connect the grinder to the power source. The indication must be:
   a. 120 volts ac for two wire 120 volt models.
   b. 230 volts ac for two wire 230 volt 50 Hz models.
   c. 240 volts ac for two wire 240 volt 60 Hz models.
6. Disconnect the grinder from the power source.
7. Check the voltage across terminal B and the re-

SERVICE (cont,)

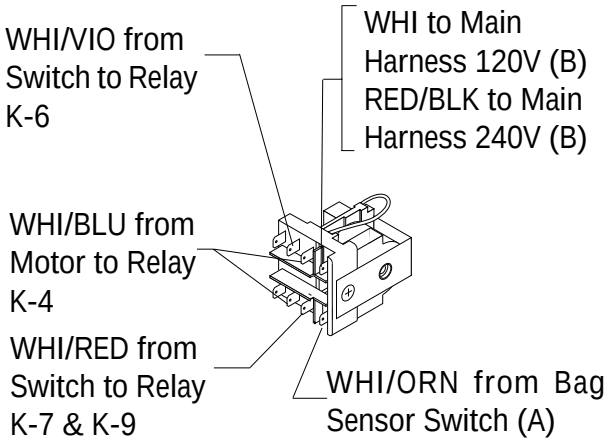
RELAY (cont.)

Removal and Replacement (120 Volt and 240V 60 Hz Models):

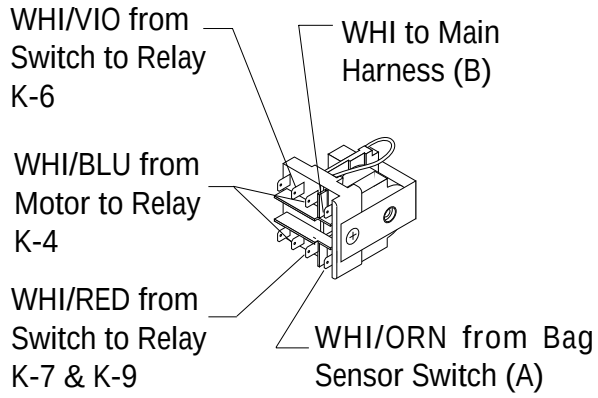
1. Remove the wires from the relay terminals.
2. Remove the two #6-32 screws securing the relay bracket w/relay to the grinder base and remove bracket and relay as an assembly.
4. Remove the #6-32 screw securing the relay to the bracket and remove relay and discard.
5. Install new relay to the mounting bracket using one #6-32 screw,
6. Mount the new relay w/bracket to the grinder base using two #6-32 screws.
7. Refer Fig. 15 when reconnecting the wires.

Removal and Replacement (230 volt 50 Hz Models):

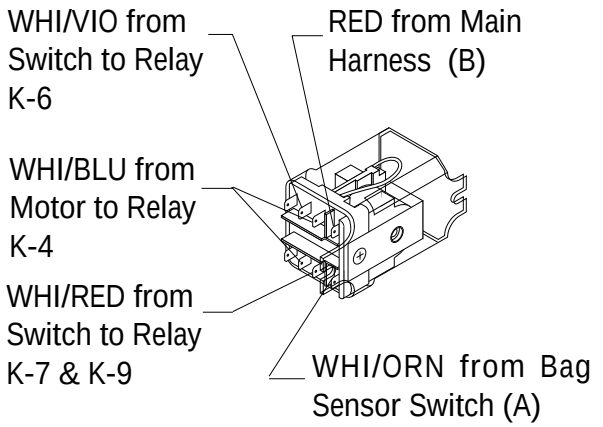
1. Remove the wires from the relay terminals.
2. Remove the two #6-32 screws securing the relay to the grinder base.
4. Remove relay and discard.
5. Install new relay to the grinder base using two #6-32 screw.
6. Refer Fig. 15 when reconnecting the wires.


WHI/VIO from Switch to Relay K-6
WHI to Main Harness 120V (B) RED/BLK to Main Harness 240V (B)
WHI/BLU from Motor to Relay K-4
WHI/RED from Switch to Relay K-7 & K-9
WHI/ORN from Bag Sensor Switch (A)

120V AND 240 VOLT AC MODELS


WHI/VIO from Switch to Relay K-6
WHI to Main Harness (B)
WHI/BLU from Motor to Relay K-4
WHI/RED from Switch to Relay K-7 & K-9
WHI/ORN from Bag Sensor Switch (A)

120 VOLT DC MODELS


WHI/VIO from Switch to Relay K-6
RED from Main Harness (B)
WHI/BLU from Motor to Relay K-4
WHI/RED from Switch to Relay K-7 & K-9
WHI/ORN from Bag Sensor Switch (A)

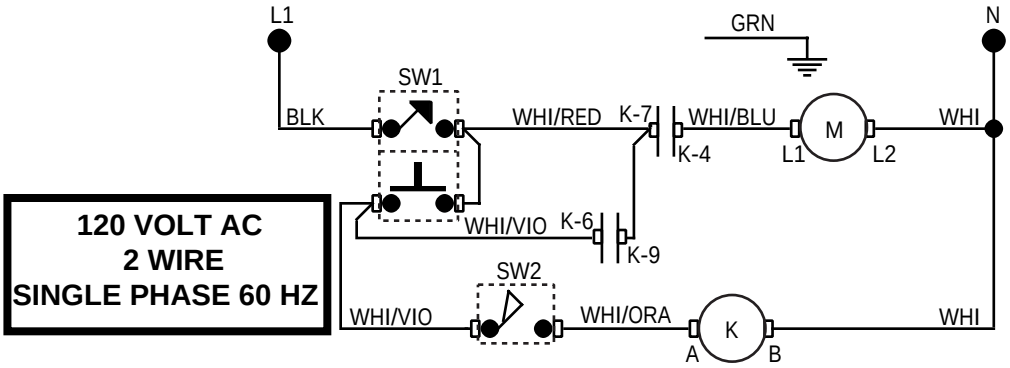
230 VOLT AC 50 Hz MODELS

P1707

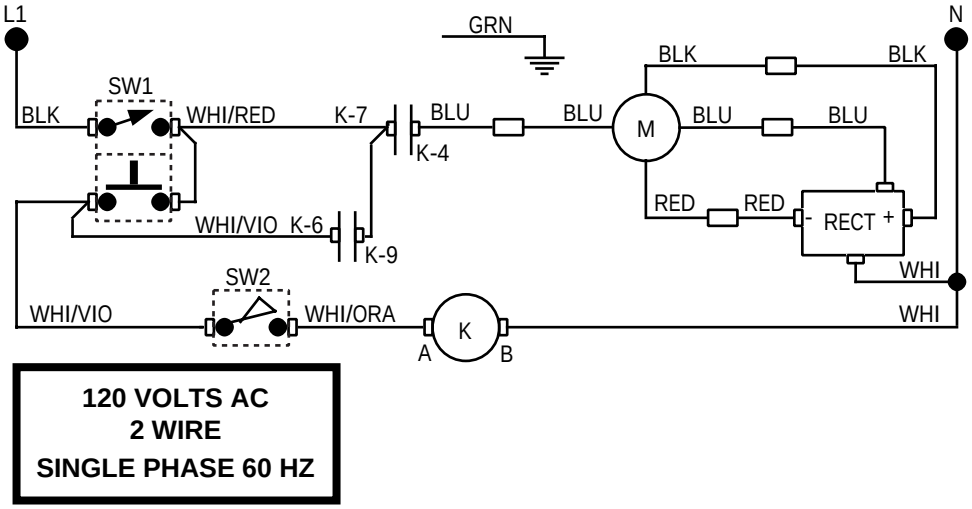
FIG. 15 RELAY TERMINALS

(Revised January 2000)

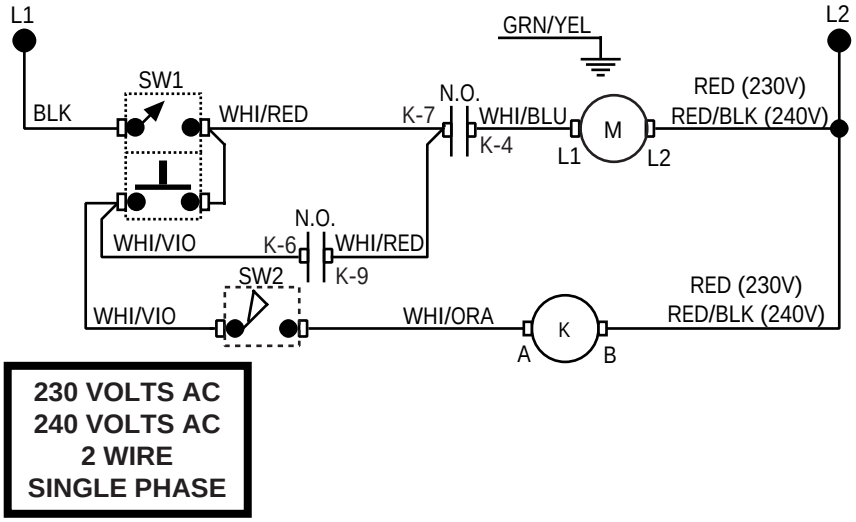
SCHEMATIC WIRING DIAGRAM G1, G2 & G3



SCHEMATIC WIRING DIAGRAM G1-MD



SCHEMATIC WIRING DIAGRAM G1A, G2A & G3A



(Revised January 2000)